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Two new conidial fungi from Chapada Diamantina, Brazil

Carolina Ribeiro Silva[1], Luís Fernando Pascholati Gusmão[2*],
& Rafael F. Castañeda-Ruiz[3]

[1] *Depto. de Micologia, Universidade Federal de Pernambuco, 50670-420, Recife, Brazil*
[2]*Depto. de Ciências Biológicas, Lab. de Micologia, Universidade Estadualde Feira de Santana,*
Avenida Transnordestina s/n, bairro Novo horizonte, 44036-900, Feira de Santana, Brazil
[3]*Inst. de Investigaciones Fundamentales en Agricultura Tropical 'Alejandro de Humboldt' (INIFAT),*
Académico Titular de la Academia de Ciencias de Cuba,
Calle 1 Esq. 2, Santiago de Las Vegas, C. Habana, Cuba, C.P. 17200
* Correspondence to: *lgusmao@uefs.br*

Abstract —*Phaeoschizotrichum ramosum* gen. & sp. nov. and *Pyriculariopsis bicolorata* sp. nov., two new asexual fungi collected on leaves of *Calophyllum brasiliense* in the Brazilian semiarid Caatinga region, are described and illustrated. *Phaeoschizotrichum ramosum* is characterized by distinctly branched conidiophores, discrete, terminal, sympodially extended conidiogenous cells, and subulate to narrowly obclavate, 1–4-septate, pale brown conidia. *Pyriculariopsis bicolorata* is distinguished by conidia that are obclavate to subulate, 1-septate, bicolored, and smooth.

Key words — microfungi, taxonomy, leaf litter

Introduction

During an investigation of conidial fungi associated with decaying leaves of *Calophyllum brasiliense* Cambess. (*Clusiaceae*) in a riparian forest of Chapada Diamantina (Piatã, Bahia) in the semiarid Caatinga region of Brazil, two interesting fungi were collected. One was remarkably different from all previously described hyphomycete genera (Seifert et al. 2011) while the other differed from all *Pyriculariopsis* species (Iturriaga et al. 2008, Soares et al. 2011). The two fungi are therefore described here as new.

Materials & methods

During studies in periods September 2013 to July 2014 leaves of *C., brasiliense* were collected in Piatã, Bahia. The material was taken to the laboratory using the methodology by Castañeda-Ruiz (2005). Sample leaves of *C. brasiliense* were placed in plastic bags. In

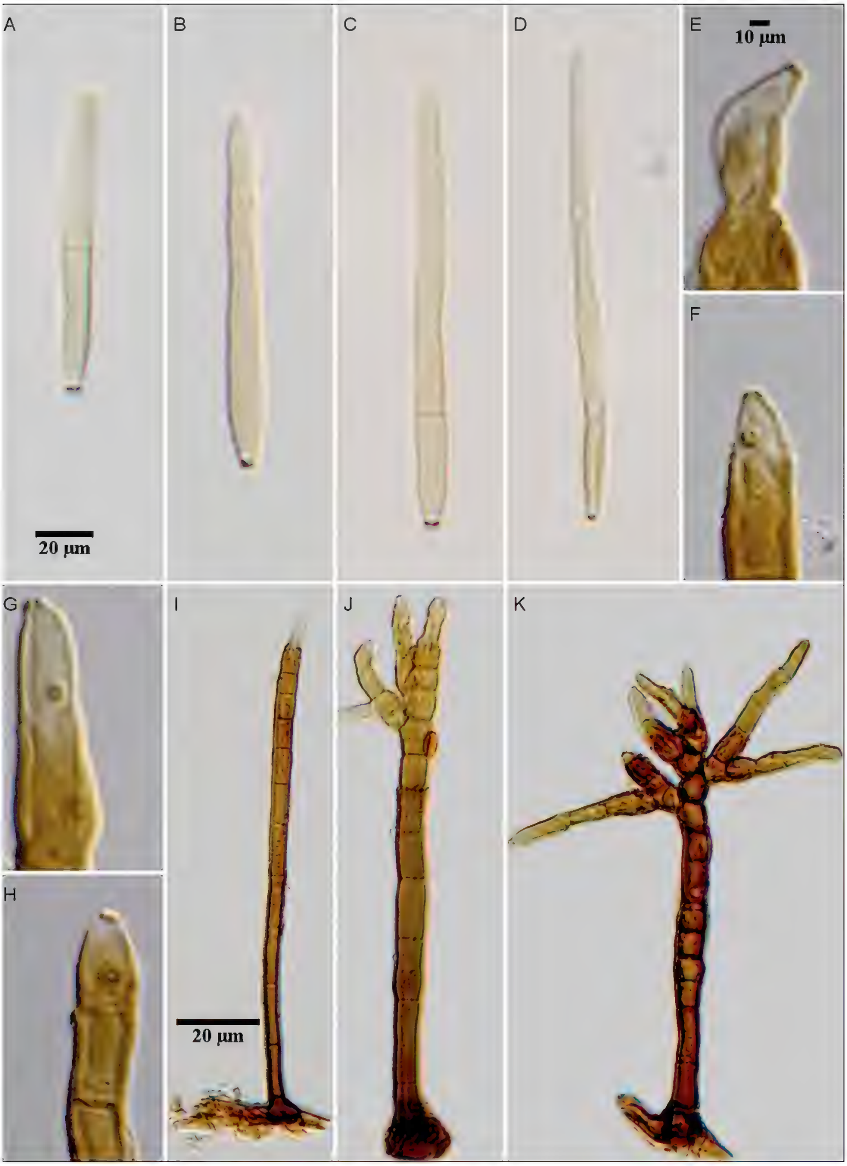

Fig. 1. *Phaeoschizotrichum ramosum* (ex HUEFS 210423). A–D. Conidia. E–H. Conidiogenous cells. I–K. Conidiophores and conidiogenous cells.

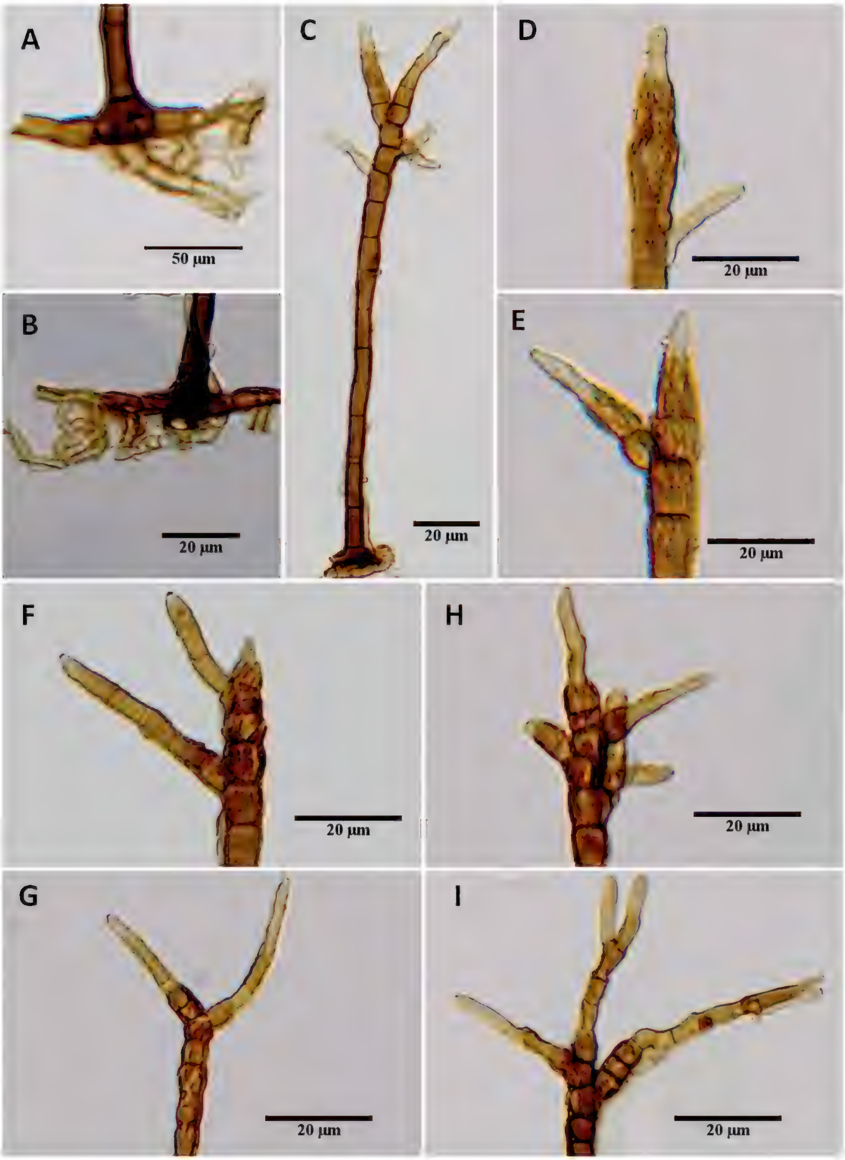

Fig. 2. *Phaeoschizotrichum ramosum* (ex HUEFS 210423). A–B. Hyphae and conidiophore basal cells. C. Conidiophore and conidiogenous cells. D–I. Branches with fissured outer cell walls and conidiogenous cells.

Colonies on the natural substratum, effuse, hairy, amphigenous, brown. Mycelium superficial, composed of septate, pale brown, 2–4 µm wide, smooth, branched hyphae, forming an anastomosed network of textura epidermoidea appearance. Conidiophores distinct, single, rarely unbranched, mostly branched above, erect, cylindrical, smooth near the base, ventricose, closely septate, with fissured outer cell walls near the apex and branches, with up to 10 enteroblastic percurrent extensions in the main axis and branches, brown below, subhyaline to pale brown above, 100–200 × 5–10 µm. Conidiogenous cells polyblastic, cylindrical-subulate, slightly denticulate, weakly melanized at the conidiogenous loci, subhyaline to pale brown, sympodially elongated after enteroblastic percurrent extensions, smooth sometimes cracked, furrowed or leprous near the percurrent elongation, 15–50 × 4–5 µm. Conidia solitary, subulate, narrowly obclavate, truncate, slightly obscure at the base, rounded or obtuse at the apex, 1–4-septate, mostly 3-septate, pale brown, 25–68 × 2.5–4 µm, smooth, rarely verruculose, dry.

Pyriculariopsis bicolorata C.R. Silva, Gusmão & R.F. Castañeda, **sp. nov.** Fig. 3

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Differs from *Pyriculariopsis* spp. by smaller, 1-septate, bicolored conidia.

Type: Brazil, Bahia, Piatã, Serra da Tromba, 13°07'S 41°50'W, on dead leaf of *Calophyllum brasiliense*, 2 X. 2013, coll. C.R. Silva (**Holotype**: HUEFS 210424).

Etymology: Latin, *bicolorata*, referring to the two-colored conidia.

Colonies on the natural substratum, effuse, hairy, hypophyllous, brown. Mycelium superficial and immersed, composed of septate, branched, brown, 1–2 µm wide, smooth hyphae. Conidiophores distinct, single, develop as lateral branch of hyphae, unbranched, cylindrical, straight to slightly flexuous, 4–7-septate, brown dark at the base becoming paler to the apex, with 2–5 percurrent extensions, 75–175 × 2.5–4 µm, smooth. Conidial secession schizolytic. Conidiogenous cells polyblastic, integrated, mostly terminal, sometimes intercalary, sympodially elongated, slightly denticulate, pale brown, 15–47.5 × 2.5–4 µm, slightly cicatrized at the loci. Conidia obclavate, truncate at the base, obtuse and rounded apex, slightly constricted at the septa, 1-septate, bicolored, brown basal cell, subhyaline apical cell, single, dry, 12–18 × 2.5–4 µm.

Note: A key to eight *Pyriculariopsis* species with conidial illustrations was provided by Iturriaga et al. (2008); subsequently Soares et al. (2011) named *P. calatheae*, which is characterized by cylindrical-fusiform to obclavate, 18–36 × 5–7 µm, 1–2-septate, often with a rostrate apical cell, 3–12 × 2–4 µm, pale brown to subhyaline. None of the nine previously described species of *Pyriculariopsis* is close to or resembles *P. bicolorata*.

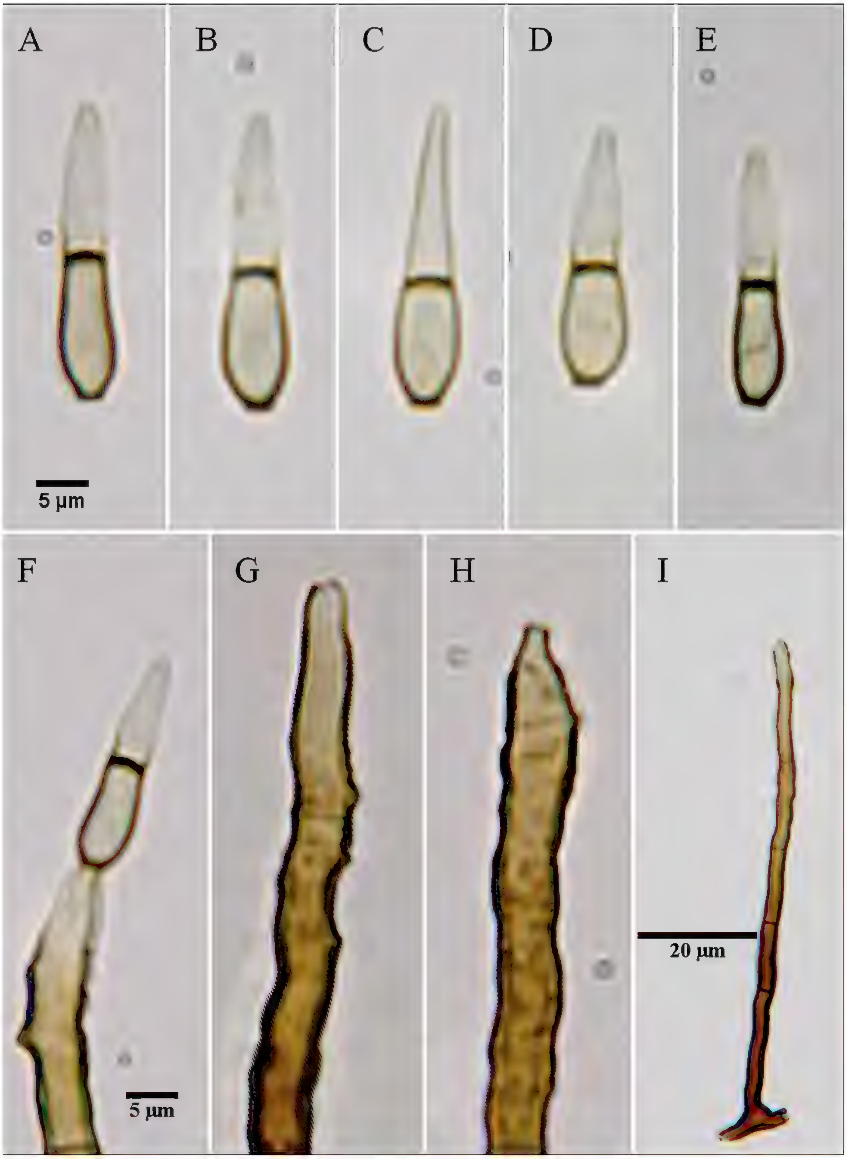

Fig. 3. *Pyriculariopsis bicolorata* (ex HUEFS 210424). A–E. Conidia. F. Conidium and conidiogenous cells. G–H. Conidiogenous cells. I. Conidiophore with external hyphae.

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